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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,470	08/29/2006	Masaru Takagi	12480-000175/US	3750
36593 7590 02/24/2011 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195				
EXAMINER BAUM, STUART F				
ART UNIT		PAPER NUMBER		
1638				
MAIL DATE		DELIVERY MODE		
02/24/2011		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



# Office Action Summary

**Application No.**

10/574,470

**Applicant(s)**

TAKAGI ET AL.

**Examiner**

STUART F. BAUM

**Art Unit**

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-36 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_



## DETAILED ACTION

### Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claims 1, 3-4 and 9-34, drawn to a process for producing a sterile plant comprising a transcription factor fused with a functional peptide that converts the transcription factor into a transcriptional repressor, and wherein the fusion protein causes the plant to be sterile.

**If Applicants elect Group I, Applicants are to elect one DNA sequence and one corresponding amino acid sequence from any one of claims 16-25 and Applicants are to elect one or more corresponding peptide sequences recited in any one of claims 26-32, wherein the elected peptide sequence(s) is/are part of said corresponding amino acid sequence.**

Group II, claim 2, drawn to a process for producing a sterile plant comprising a transcription factor fused with a functional peptide that converts the transcription factor into a transcriptional repressor, and wherein the fusion protein causes a change in flower morphology.

Group III, claims 5-8, drawn to a process for producing a sterile plant comprising a transcription factor fused with a functional peptide that converts the transcription factor into a transcriptional repressor, and wherein the fusion protein inhibits anther dehiscence.



Group IV, claims 35-36, drawn to a kit that produces a sterile plant comprising a gene associated with formation of a floral organ, stamen, pistil or dehiscence of anthers and a polynucleotide that encodes a peptide that converts any transcription factor into a repressor and promoter.

2. The inventions listed as Groups I-IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: a transcription factor fused with a functional peptide that converts the transcription factor into a transcriptional repressor is taught in the prior art. Hiratsu et al (2003, *The Plant Journal* 34:733-739) teach the EAR motif, a repression domain of only 12 amino acids that when fused to transcription factors, converts the transcription factors to dominant repressors that suppresses the expression of specific target genes (abstract).

3. In addition, the claims are not linked by a single technical feature because they are each drawn to products and processes not shared by the other. The method of producing a sterile plant comprising a transcription factor fused with a functional peptide that converts the transcription factor into a transcriptional repressor, and wherein the fusion protein causes the plant to be sterile of Group I is not shared by the method of producing a sterile plant comprising a transcription factor fused with a functional peptide that converts the transcription factor into a transcriptional repressor, and wherein the fusion protein causes a change in flower morphology of Group II which is not shared by the method of producing a sterile plant comprising a transcription factor fused with a functional peptide that converts the transcription factor into a transcriptional



repressor, and wherein the fusion protein inhibits anther dehiscence of Group III which is not shared by the kit of Group IV.

4. Each of Inventions I-IV are capable of being separately made, independently used and the patentability of one does not render the others obvious or unpatentable.
5. Because these inventions are distinct for the reasons given above, have acquired a separate status in the art as shown by the literature and sequence searches required for each of the Inventions are not required for another of the Inventions, restriction for examination purposes as indicated is proper.
6. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).
7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

/Stuart F. Baum/  
Stuart F. Baum Ph.D.  
Primary Examiner  
Art Unit 1638